

Title: **Procedure for Creating a Pesticide Stock from Powdered Reagent**

| | | |
|------------------|-------------------|-------------|
| Author: | _____ | Date: _____ |
| | Ed Wirth | |
| Program Manager: | _____ | Date: _____ |
| | Michael H. Fulton | |
| Branch Chief: | _____ | Date: _____ |
| | Geoffrey I. Scott | |

1.0 OBJECTIVE

This section describes the procedure for making stock pesticide solutions from powdered or dry reagent pesticides.

2.0 HEALTH AND SAFETY

Personnel should wear solvent resistant gloves, lab coat, and safety glasses when working with chemicals associated with this procedure. This SOP should be performed in a properly functioning laboratory fume hood.

3.0 PERSONNEL/TRAINING/RESPONSIBILITIES

Any employee who routinely works in the laboratory should be capable of performing this task. Training of new staff should be carried out under supervision of an experienced technical employee familiar with this SOP before the new employee can work unsupervised.

4.0 REQUIRED AND RECOMMENDED MATERIALS

This section lists the required supplies and equipment:

| | |
|----------------------------|---|
| Pesticide grade acetone | Teflon solvent bottle |
| Volumetric Flask | Protective gloves |
| 5-place analytical balance | Amber screw-capped bottle (w/ Teflon lined cap) |
| Labels | Glass powder funnel |

5.0 PROCEDURE

5.1 Glassware Preparation

- All glassware should be washed prior to use according to SOP 00-XXX.
- Prior to the weighing the pesticide, all glassware should be rinsed twice with acetone or the appropriate solvent to be used for storage.

5.2 Making the Pesticide Stock

- While wearing gloves, weigh the pesticide ampoule or vial and record the total weight (includes the chemical, glass vial and lid) on the 5-place analytical balance in room 230.
- Dissolve the chemical in acetone by carefully pouring the chemical into the volumetric flask (using a funnel if needed).
- Dilute the solution to the volume of the volumetric flask and ensure that there is no visible particulate matter remaining.
- Re-weigh the glass vial and cap and record the weight.
- Calculate the concentration in the solution by subtracting the empty vial weight from the total weight and dividing by the volume of the volumetric flask.
- Pour the contents of the volumetric flask in to an appropriate amber bottle and cap with a teflon lined cap.
- Label the amber bottle with the following information: pesticide, concentration, solvent used, date made, and name of preparer.

6.0 QUALITY CONTROL/QUALITY ASSURANCE

Personnel should adhere to good laboratory practices while working with acetone. This procedure should always be performed in a fume hood and proper precautions to minimize personal exposure to pesticides should be taken.

7.0 REFERENCES

DeWoskin, R.S. 1984. Good laboratory practice regulations: a comparison. Research Triangle Institute, Research Triangle Park, North Carolina. 63 pp.

USEPA. 1979. Good laboratory practice standards for health effects. Part 772 - Standards for development of test data. Fed. Reg. 44:27362-27375, May 9, 1979.

USEPA. 1980. Physical, chemical, persistence, and ecological effects testing; good laboratory practice standards (proposed rule). 40 CFR 772, Fed. Reg. 45:77353-77365. November 21, 1980.